(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 28 July 2005 (28.07.2005)

(10) International Publication Number WO 2005/068982 A1

(51) International Patent Classification7: 21/25, 21/27, 33/04

G01N 21/78,

(21) International Application Number:

PCT/DK2005/000027

(22) International Filing Date: 17 January 2005 (17.01.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/536,832

16 January 2004 (16.01.2004)

- (71) Applicant (for all designated States except US): CHR. HANSEN A/S [DK/DK]; P.O. Box 407, Bøge Allé 10-12, DK-2970 Hørsholm (DK).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HOULBERG, Ulf [DK/DK]; Gl. Vassingerødvej 3, DK-3540 Lynge (DK). HERBSLEB, Peer [DK/DK]; Haverslevvej 10, DK-9530

Støvring (DK). STURINO, Joseph [US/US]; 3241 South Delaware Avenue, Milwaukee, Wisconsin 53207 (US).

- (74) Common Representative: CHR. HANSEN A/S; Attn: Iben Haasum, P.O. Box 407, Bøge Allé 10-12, DK-2970 Hørsholm (DK).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR COLORIMETRIC DETERMINATION OF A CHEMICAL OR PHYSICAL PROP-ERTY OF A TURBID MEDIUM

Example of	scan of	the mic	rotiter p	late		4.47	4.88	5.08	<standard 3<="" column="" in="" ph="" th=""></standard>
Column 3				a sure					Standards
Column 2				•					Samples
Column 1									Standards
	7		15.4		5-75-				
	H	G	F	Ē	D	С	B	A	
	5.16	5.48	5.67	6.00	6.21	6.49	6.65	6.86	<standard 1<="" column="" in="" ph="" td=""></standard>
Colour values	-6	-5	-5	-6	-9	-11	-11	-11	a*
from Column2	-18	-19	-18	-15	-8	-3	4	9	b*
-	252	255	254	248	222	195	160	141	Hue ^o
	6.76	6.89	6.86	6.65	6.16	5.74	5.16	4.62	Sample pH
	0.002%	0.005%	0.014%	0.041%	0.123%	0.370%	1.111%	3.333%	tnoculation level

(57) Abstract: A new method and a system for the simultaneous determination of a biological, chemical and/or physical property of a plurality of individual samples of a turbid is described. The invention relates to a system and colorimetric method for simultaneous determination and measuring properties, such as acidification or pH value, redox potentials, viscosity, diffusion, enzymatic activity, etc. of a plurality of individual samples of a turbid or opaque medium, such as, e.g. milk, whey and related products. In particular, this invention relates to a method for non-invasively and/or non-destructively scanning samples or an array of samples, and determine on the basis of the scanning a specific property, such as pH, of the samples. The method may also be used for multivariate determinations of chemical and/or physical properties.

WO 2005/068982 A1



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM,

AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

 as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.